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10/537,127	06/02/2005	Angel Janevski	US020489	8391

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EXAMINER

TAKELE, MESEKER

ART UNIT	PAPER NUMBER
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2174

MAIL DATE	DELIVERY MODE
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08/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/537,127

Applicant(s)

JANEVSKI, ANGEL

Examiner

Meseker Takele

Art Unit

2174

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/20/2006 and 06/02/2005.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claims Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al (US Patent No.: 6,211,856) in view of Cooper et al. (US Patent No.: 6,509,892).

As to claim 1, Choi discloses a control panel for a device, comprising:

a graphical user interface (GUI) displaying a plurality of control icons (Example, GUI touch screen display on a hand-held device that provides a maximum number of icons on the display yet the features of the icons are easily accessible by a user, see, Col., 1 lines, 52-56)

wherein the plurality of control icons represent a plurality of corresponding control functions for controlling the device (example, The devices include a display for displaying a GUI, and a controller for enabling a user to control the system through a touch screen functionality of the GUI, see, col., 1 lines, 15-18)

and means for providing tactile detect ability to said GUI to allow a user to detect at least one of the pluralities of control icons by touch (example, the individual keys surrounding area 14 are magnified and large enough for easy touch screen activation of a single key by a finger, col. 2 lines, 63-66 and Figure 1b).

However Choi does not specifically disclose means for providing tactile detectability.

Cooper from the same field of endeavor discloses means for providing tactile detectability (example, tactile detectability, see Abstract).

It would have been obvious to have modified Choi's GUI touch screen device at the time of the invention with tactile detectability as presented by Cooper. The motivation to combine a control surface that is flexible is enabled to provide a tactile-detectable graphical representation of graphical output from a data processing system.

As to claim 9, Choi discloses further wherein said GUI displays a plurality of user-selectable and user controllable functionalities distributed over multiple display interfaces in a control hierarchy of a system (see Figure 2a).

As to claim 10, Choi discloses wherein said system is a consumer electronics system (see col., 3 lines, 24-26).

3. Claims 2, 4, 5, 6, 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al (US Patent No.: 6,211,856) in view of Cooper et al. (US Patent No.: 6,509,892) and further in view of Rosenberg (US Patent No.: 6,429,846).

As to claim 2, Choi in view of Cooper does not disclose wherein said means for providing tactile detectability provides at least one surface vibration to said GUI.

Rosenberg from the same field of endeavor discloses wherein said means for providing tactile detectability provides at least one surface vibration to said GUI (col., 5 lines, 59-66).

It would have been obvious to have modified the modified Choi's GUI touch screen device at the time of the invention with tactile sensations as presented by Rosenberg.

The motivation to combine to provide haptic feedback to the user in order that the user of a touchpad is therefore able to experience haptic sensations that assist and inform the user of targeting and other control tasks within the graphical environment.

As to claim 4, Rosenberg discloses wherein at least two of the plurality of control icons has different surface vibrations (see col., 5 lines, 65-67 and col., 6 lines, 1-4).

As to claim 5, Rosenberg disclose wherein said at least one surface vibration is present on at least one control icon of said plurality of control icons and not present on a surrounding area of display (see col., 15 lines, 12-23).

As to claim 6, Choi does not disclose wherein said at least one surface vibration is present on an area of display surrounding said plurality of control icons and not present on said plurality of control icons.

Rosenberg from the same field of endeavor disclose wherein said at least one surface vibration is present on an area of display surrounding said plurality of control icons and not present on said plurality of control icons (col., 15 lines 19-23).

It would have been obvious to have modified the modified Choi's GUI touch screen device the time of the invention with surface vibration as presented by Rosenberg.

The motivation to combine to provide the touch input device could include multiple different regions where at least one of the regions provides the position signal and at least one other region provides a signal that is used by the computer to control a different function.

As to claim 7, Choi does not disclose wherein said at least one surface vibration is present on all of said control icons of the plurality of control icons and not present on a surrounding area of display.

Rosenberg from the same field of endeavor disclose wherein said at least one surface vibration is present on all of said control icons of the plurality of control icons and not present on a surrounding area of display (col., 15 lines 19-23).

It would have been obvious to have modified the modified Choi's GUI touch screen device the time of the invention with surface vibration as presented by Rosenberg.

The motivation to combine to provide the touch input device include multiple different regions where at least one of the regions provides the position signal and at least one other region provides a signal that is used by the computer to control a different function.

As to claim 11, Choi does not disclose wherein a surface vibration of the at least one surface vibration is provided to said GUI when the user is transitioning between the multiple display interfaces of the control hierarchy.

Rosenberg from the same field of endeavor disclose wherein a surface vibration of the at least one surface vibration is provided to said GUI when the user is transitioning between the multiple display interfaces of the control hierarchy (see col.8, lines, 1-9).

It would have been obvious to have modified the modified Choi's GUI touch screen device the time of the invention with surface vibration as presented by Rosenberg.

The motivation to combine to provide the haptic sensations output on the touch control enhance interactions and manipulations in a displayed graphical environment or when controlling an electronic device.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al (US Patent No.: 6,211,856) in view of Cooper et al. (US Patent No.: 6,509,892) and further in view of Rosenberg (US Patent No.: 6,429,846) and Massimino (US Patent No.: 5,619,180).

As to claim 3, the modified Choi does not disclose wherein said at least one surface vibration is in a range of about 10Hz to about 1 kHz.

Massimino from the same field of endeavor disclose wherein said at least one surface vibration is in a range of about 10Hz to about 1 kHz (see col., 10 lines, 5-10).

It would have been obvious to have modified the modified Choi's GUI touch screen device the time of the invention with frequency of vibration on the order of 1,000 Hz as presented by Massimino.

The motivation to combine to provide a non-visual, non-reactive sensory substitution force feedback signal for use in connection with remote effectors applications, which does not overload the capabilities of the operator and which remains stable even in the presence of time delays.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al (US Patent No.: 6,211,856) in view of Cooper et al. (US Patent No.: 6,509,892) and further in view of Ling et al. (US Pub No.: 2003/0227374).

As to claim 8, Choi in view of Cooper does not disclose wherein said means for providing tactile detectability provides electrotactile stimulation to said GUI.

Ling from the same field of endeavor disclose wherein said means for providing tactile detectability provides electrotactile stimulation to said GUI (see abstract).

It would have been obvious to have modified the modified Choi's GUI touch screen device the time of the invention with electrotactile stimulation as presented by Ling.

The motivation to combine Electro-Tactile to apply Device electrical energy to the skin in order to stimulate the nerve axon of mechanoreceptors, and then generate tactile sensation (sense of touch).

6. Claim 12 is rejected as being unpatentable over Choi et al (US Patent No.: 6,211,856) in view of Massimino et al. (US Patent No.: 5,619,180) and in further in view of Ling et al. (US Pub No.: 2003/0227374).

As to claim 12, Choi discloses a method, comprising: providing a control device including a display for displaying a graphical user interface (GUI) device (example, The devices include a display for displaying a GUI, and a controller for enabling a user to control the system through a touch screen functionality of the GUI, see, col., 1 lines, 15-18)

displaying on the GUI a plurality of control icons representing various control functions wherein the control functions enable a user to control a system through the GUI (Example, GUI touch screen display on a hand-held device that provides a maximum number of icons on the display yet the features of the icons are easily accessible by a user (see, Col., 1 lines, 52-56);

and adapting at least one of the plurality of control icons so as to be detectable by a user via means selected from the group of vibrotactile means, electrotactile means, and combinations thereof (example, the individual keys surrounding area 14 are magnified and large enough for easy touch screen activation of a single key by a finger, col., 2 lines, 63-66 and Figure 1b).

However Choi does not specifically disclose of vibrotactile means.

Massimino from the same field of endeavor disclose vibrotactile means (see abstract).

It would have been obvious to have modified the modified Choi's GUI touch screen device the time of the invention with vibrotactile stimulation as presented by Massimino. The motivation to combine provides force feedback through a sensory substitution display.

Choi in view of Massimino further does not specifically disclose electrotactile means.

Ling from the same field of endeavor disclose electrotactile means (see abstract).

It would have been obvious to have modified the modified Choi's GUI touch screen device the time of the invention with electrotactile as presented by Ling. The motivation to combine Electro-Tactile to apply Device electrical energy to the skin in order to stimulate the nerve axon of mechanoreceptors, and then generate tactile sensation (sense of touch).

7. Claims 13 and 14 are rejected as being unpatentable over Choi et al (US Patent No.: 6,211,856) in view of Massimino et al. (US Patent No.: 5,619,180) and further in view of Ling et al. (US Pub No.: 2003/0227374) as applied to claim 12.

As to claim 13, the modified Choi does not disclose wherein said vibrotactile means include at least one vibration in a range of about 10 Hz to about 1 kHz.

Massimino from the same field of endeavor disclose wherein said vibrotactile means include at least one vibration in a range of about 10 Hz to about 1 kHz (see col., 10 lines, 5-10).

It would have been obvious to have modified the modified Choi's GUI touch screen device the time of the invention with 1,000Hz vibration range as presented by Massimino

The motivation to combine to provide a non-visual, non-reactive sensory substitution force feedback signal for use in connection with remote effectors applications, which does not overload the capabilities of the operator and which remains stable even in the presence of time delays.

As to claim 14, the modified Choi does not disclose wherein at least two of the plurality of control icons has a different vibrotactile characteristic.

Massimino from the same field of endeavor disclose wherein at least two of the plurality of control icons has a different vibrotactile characteristic (see col., 7 lines, 18-24).

It would have been obvious to have modified the modified Choi's GUI touch screen device the time of the invention with vibrational sensitivity in different regions as presented by Massimino.

The motivation to combine to provide a non-visual, non-reactive sensory substitution force feedback signal for use in connection with remote effectors applications, which does not overload the capabilities of the operator and which remains stable even in the presence of time delays.

8. Claims 15-20 are rejected as being unpatentable over Choi et al (US Patent No.: 6,211,856) in view of Massimino et al. (US Patent No.: 5,619,180) and in further view of Ling et al. (US Pub No.: 2003/0227374) as applied to claim 12 and Rosenberg (US Patent No.: 6429846).

As to claim 15, the modified Choi does not disclose wherein at least one vibrotactile characteristic is present on at least one control icon of said plurality of control icons and not present on a surrounding area of display.

Rosenberg from the same field of endeavor disclose wherein said at least one vibrotactile characteristic is present on at least one control icon of said plurality of control icons and not present on a surrounding area of display (see col., 15 lines, 12-23).

It would have been obvious to have modified the modified Choi's GUI touch screen device the time of the invention with surface vibration as presented by Rosenberg.

The motivation to combine to provide the touch input device could include multiple different regions where at least one of the regions provides the position signal and at least one other region provides a signal that is used by the computer to control a different function.

The modified Choi does not specifically disclose vibrotactile.

Massimino from the same field of endeavor disclose vibrotactile (see col., abstract).

It would have been obvious to have modified the modified Choi's GUI touch screen device the time of the invention with vibrotactile as presented by Massimino

The motivation to combine to provide a non-visual, non-reactive sensory substitution force feedback signal for use in connection with remote effectors applications, which does not overload the capabilities of the operator and which remains stable even in the presence of time delays.

As to claim 16, the modified Choi does not disclose wherein at least one vibrotactile characteristic is present on an area of display surrounding said plurality of control icons and not present on said plurality of control icons.

Rosenberg from the same field of endeavor disclose wherein said at least vibrotactile characteristic is present on an area of display surrounding said plurality of control icons and not present on said plurality of control icons (col., 15 lines 19-23).

It would have been obvious to have modified the modified Choi's GUI touch screen device the time of the invention with surface vibration as presented by Rosenberg.

The motivation to combine to provide the touch input device include multiple different regions where at least one of the regions provides the position signal and at least one other region provides a signal that is used by the computer to control a different function.

The modified Choi further does not specifically disclose vibrotactile.

Massimino from the same field of endeavor disclose vibrotactile (see col., abstract).

It would have been obvious to have modified the modified Choi's GUI touch screen device the time of the invention with vibrotactile as presented by Massimino

The motivation to combine to provide a non-visual, non-reactive sensory substitution force feedback signal for use in connection with remote effectors applications, which does not overload the capabilities of the operator and which remains stable even in the presence of time delays.

As to claim 17, the modified Choi does not disclose wherein at least one vibrotactile characteristic is present on all of said control icons of said plurality of control icons and not present on a surrounding area of display.

Rosenberg from the same field of endeavor disclose wherein said at least one surface vibration is present on all of said control icons of the plurality of control icons and not present on a surrounding area of display (col., 15 lines 19-23).

It would have been obvious to have modified the modified Choi's GUI touch screen device the time of the invention with surface vibration as presented by Rosenberg.

The motivation to combine to provide the touch input device include multiple different regions where at least one of the regions provides the position signal and at least one other region provides a signal that is used by the computer to control a different function.

The modified Choi further does not specifically disclose vibrotactile.

Massimino from the same field of endeavor disclose vibrotactile (see col., abstract).

It would have been obvious to have modified the modified Choi's GUI touch screen device the time of the invention with vibrotactile as presented by Massimino.

The motivation to combine to provide a non-visual, non-reactive sensory substitution force feedback signal for use in connection with remote effectors applications, which does not overload the capabilities of the operator and which remains stable even in the presence of time delays.

As to claim 18, the modified Choi discloses further wherein said GUI displays a plurality of user-selectable and user controllable functionalities distributed over multiple display interfaces in a control hierarchy of a system (see Figure 2a).

As to claim 19, the modified Choi discloses wherein said system is a consumer electronics system (see col., 3 lines, 24-26).

As to claim 20, the modified Choi does not disclose wherein a surface vibration of the at least one surface vibration is provided to said GUI when the user is transitioning between the multiple display interfaces of the control hierarchy.

Rosenberg from the same field of endeavor disclose wherein a surface vibration of the at least one surface vibration is provided to said GUI when the user is transitioning between the multiple display interfaces of the control hierarchy (see col.8, lines, 1-9).

It would have been obvious to have modified the modified Choi's GUI touch screen device the time of the invention with surface vibration as presented by Rosenberg.

The motivation to combine to provide the haptic sensations output on the touch control enhance interactions and manipulations in a displayed graphical environment or when controlling an electronic device.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Flowers et al. (US Patent No.: 5038142) is cited to teach Touch sensing display screen apparatus.

Blouin (US Patent No.: 5,977,867) is cited to teach Touch pad panel with tactile feedback.

Shaw et al. (US Patent No.: 7,119,789) is cited to teach Haptic interface including clutch control.

Kazlauskys et al. (US Pub No.: 2001/0029319) is cited to teach System and method of monitoring and modifying human activity-based behavior.

Tremblay et al. (US Pub No.: 2003/0016207) is cited to teach Tactile feedback man-machine interface device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Meseker Takele whose telephone number is (571) 270-1653. The examiner can normally be reached on Monday - Friday 7:30AM- 5:00PM est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2174

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MT

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